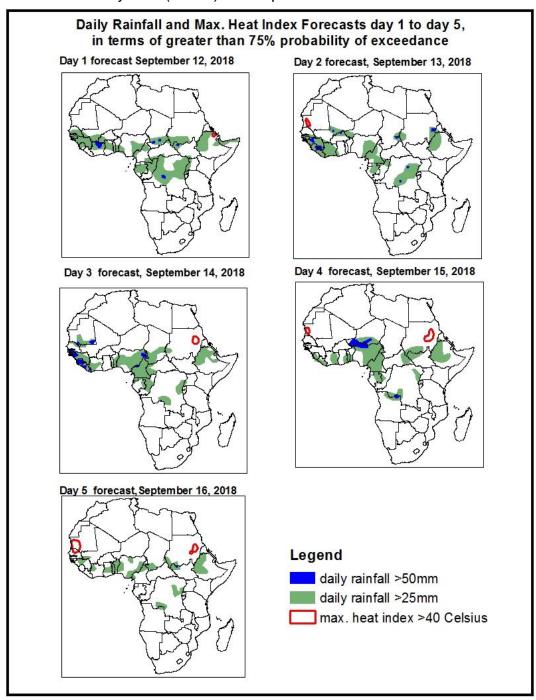
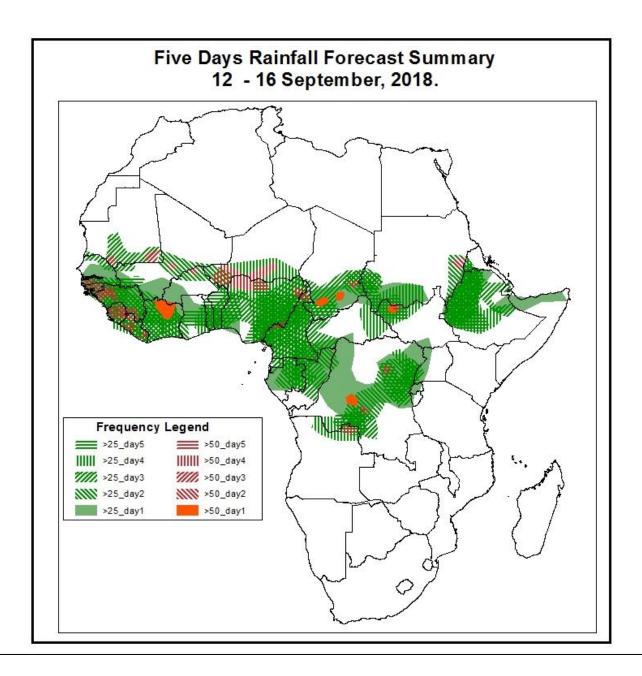
# 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on September 11, 2018)

## 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Sep 12, – Sept 16, 2018)

The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



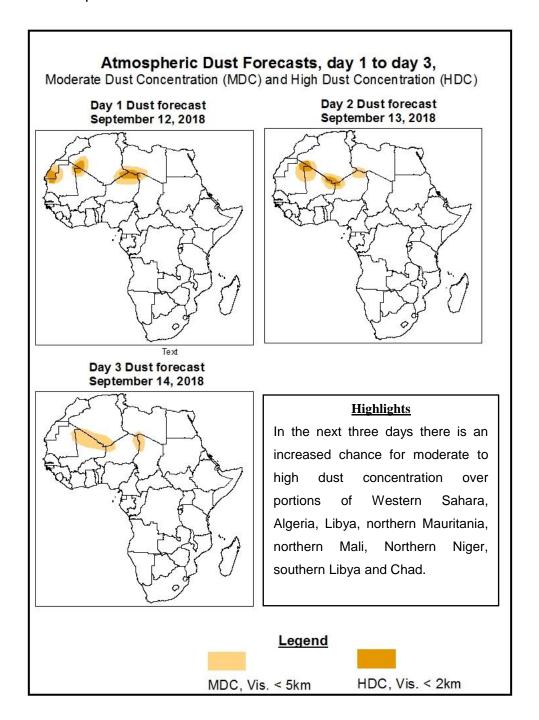


#### <u>Highlights</u>

- In the next five days, westward propagating lower-level cyclonic systems across West and Central Africa, and active lower-level wind convergences in the Congo Basin and the Greater Horn of Africa are expected to enhance rainfall.
- There is an increased chance for 2 or more days of moderate to heavy rainfall over many places in West Africa, and portions of Central and the Greater Horn of Africa.
- There is an increased chance for temperature heat index values to exceed 41°C over local areas in Mauritania and Sudan.

# **1.2. Atmospheric Dust Concentration Forecasts** (valid: September 12 – September 14, 2018)

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



#### **1.3. Model Discussion,** Valid: September 12 – September 16, 2018

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken, with its central pressure value decreasing from about 1032hPa to 1021hPa during the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to intensify during the forecast period. The central pressure value is expected to increase from 1032hPa to 1040hPa through 120 hours.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to intensify slightly. Its central value is expected to increase from 1030hPa to 1032hPa during the forecast period.

Thermal low over northwestern Mali is expected to shift over to southern Mauritania while it is slightly deepening. Its central pressure value is expected to decrease from 1007hPa to 1006 hPa during the forecast period. A thermal low across Chad is expected to maintain an average central pressure value of 1009hPa during the forecast period.

At 925hPa, dry strong northeasterly to easterly flow is expected to prevail over Western Sahara, northern Mauritania, parts of Algeria, Chad, Libya, northern Niger, and portions of Egypt and Sudan. In contrast, moist southwesterly to westerly monsoon flow from the Atlantic Ocean is expected to remain active across much of the Gulf of Guinea countries and the neighboring areas of the Sahel region.

At 850hPa, a cyclonic circulation over eastern Guinea-Conakry and Cote d'Ivoire is expected to leave the West Africa cost through 96 hours. Another cyclonic circulation is expected to form and strengthen across the Gulf of Guinea region during the second half of the forecast period. Lower-level wind Convergence in Sudan and Ethiopia and meridional wind convergence in the Congo Basin are expected to remain active during the forecast period.

At 700-hPa, a cyclonic trough over the far western West Africa, with its associated strong easterly flow is expected to leave the West Africa coast through 72 hours. Another lower-level

trough across Nigeria is expected to move over to Cote d'Ivoire and Burkina Faso during the forecast period.

In the next five days, westward propagating lower-level cyclonic systems across West and Central Africa, and active lower-level wind convergences in the Congo Basin and the Greater Horn of Africa are expected to enhance rainfall. There is an increased chance for 2 or more days of moderate to heavy rainfall over many places in West Africa, and portions of Central and the Greater Horn of Africa. There is an increased chance for temperature heat index values to exceed 41°C over local areas in Mauritania and Sudan.

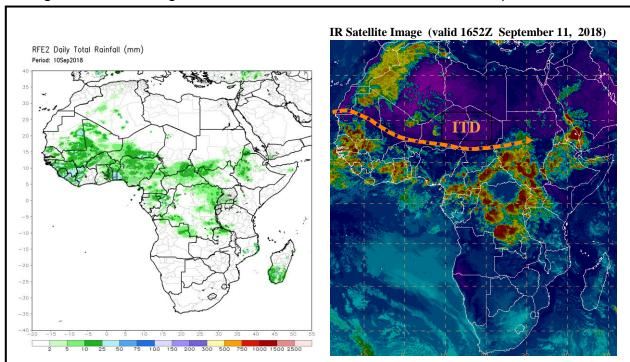
# 2.0. Previous and Current Day Weather over Africa

### **2.1. Weather assessment for the previous day** (September 10, 2018)

Moderate to locally heavy rainfall was observed over parts of Algeria, Mauritania, Mali, Senegal, Sierra Leone, Liberia, Cote d'Ivoire ,Burkina Faso, Ghana, Togo, Benin, Niger, Nigeria, Cameroon, Chad, CAR, Gabo, Congo, Sudan, DRC, Mozambique and Madagascar.

## **2.2.** Weather assessment for the current day (September 11, 2018)

Intense convective clouds are observed over parts of Mauritania, Mali, Senegal, Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Togo, Nigeria, Cameroon, Equatorial Guinea, Congo, CAR, DRC, Uganda, South Sudan, Sudan, Eritrea and Ethiopia.



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover and ITD (right) based on IR Satellite image and 925hPa wind.

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